



[6450-01-P]

DEPARTMENT OF ENERGY

National Nuclear Security Administration

Notice of Availability of the Draft Surplus Plutonium Disposition Supplemental Environmental Impact Statement

AGENCY: National Nuclear Security Administration, U.S. Department of Energy.

ACTION: Notice of Availability.

SUMMARY: The U. S. Department of Energy (DOE) announces the availability of the Draft Surplus Plutonium Disposition Supplemental Environmental Impact Statement (SPD Supplemental EIS; DOE/EIS-0283-S2) for public comment. DOE also is announcing the dates, times and locations for public hearings to receive comments on the Draft SPD Supplemental EIS. The Draft SPD Supplemental EIS analyzes the potential environmental impacts of alternatives for disposition of 13.1 metric tons (14.4 tons) of surplus plutonium for which DOE has not made a disposition decision, including 7.1 metric tons (7.8 tons) of plutonium from pits that were declared excess to national defense needs. It also updates previous DOE NEPA analyses on plutonium disposition to consider additional options for pit disassembly and conversion, which entails processing plutonium metal components to produce an oxide form of plutonium suitable for disposition, and the use of mixed oxide (MOX) fuel fabricated from surplus plutonium in domestic commercial nuclear power reactors to generate electricity, including five reactors at two specific Tennessee Valley Authority (TVA) reactor plants. DOE is not revisiting the decision to fabricate 34 metric tons (MT) (37.5 tons) of surplus plutonium into MOX fuel in the MOX Fuel Fabrication Facility (MFFF) (65 FR 1608, January 11,

2000 and 68 FR 20134, April 24, 2003), now under construction at DOE's Savannah River Site (SRS) in South Carolina, and to irradiate the MOX fuel in commercial nuclear reactors used to generate electricity.

TVA is a cooperating agency on this SPD Supplemental EIS. TVA is considering the use of MOX fuel, produced as part of DOE's Surplus Plutonium Disposition Program, in its nuclear power reactors.

DATES: DOE invites Federal agencies, state and local governments, Native American tribes, industry, other interested organizations, and members of the public to comment on the Draft SPD Supplemental EIS during a 60-day public comment period which starts with the publication of the Environmental Protection Agency's Notice of Availability in the Federal Register and ends on **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Comments received after this date will be considered to the extent practicable. DOE will hold public hearings on the Draft SPD Supplemental EIS; the dates, times and locations are listed under **"SUPPLEMENTARY INFORMATION."**

ADDRESSES: Please direct written comments on the Draft SPD Supplemental EIS to Ms. Sachiko McAlhany, SPD Supplemental EIS NEPA Document Manager, U. S. Department of Energy, P.O. Box 2324, Germantown, MD 20874-2324. Comments may also be submitted via e-mail to spdsupplementaleis@saic.com or by toll-free fax to 877-865-0277. DOE will give equal weight to written, e-mail, fax, telephone, and oral comments. Questions regarding the Supplemental EIS process and requests to be placed

on the SPD Supplemental EIS mailing list should be directed to Ms. McAlhany by any of the means given above or by calling toll-free 877-344-0513.

For general information about the DOE NEPA process, please contact: Ms. Carol Borgstrom, Director, Office of NEPA Policy and Compliance (GC-54), U.S. Department of Energy, 1000 Independence Avenue SW, Washington, DC 20585, telephone (202) 586-4600, or leave a message at 1-800-472-2756. Additional information regarding DOE NEPA activities and access to many of DOE's NEPA documents are available on the internet through the DOE NEPA Web site at <http://www.energy.gov/nepa>.

SUPPLEMENTARY INFORMATION:

DOE has prepared the Draft SPD Supplemental EIS in accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations that implement the procedural provisions of NEPA ([40 CFR Parts 1500-1508](#)), and DOE regulations implementing NEPA ([10 CFR part 1021](#)).

Background: To reduce the threat of nuclear weapons proliferation, DOE is engaged in a program to disposition its surplus, weapons-usable plutonium in an environmentally sound manner, by converting such plutonium into proliferation-resistant forms that can never again be readily used in nuclear weapons. The U.S. inventory of surplus plutonium is in several forms. The largest quantity is plutonium metal in pits (a nuclear weapons component). The remainder is non-pit plutonium, which includes plutonium oxides and metal in a variety of forms and purities.

DOE has already decided to fabricate 34 metric tons (MT) (37.5 tons) of surplus plutonium into MOX fuel in the MFFF (65 FR 1608, January 11, 2000 and 68 FR 20134, April 24, 2003), now under construction at SRS, and to irradiate the MOX fuel in commercial nuclear reactors used to generate electricity, thereby rendering the plutonium into a spent fuel form not readily usable in nuclear weapons. DOE is not revisiting this decision in the SPD Supplemental EIS.

DOE announced its intent to prepare the SPD Supplemental EIS in a notice of intent (NOI) in 2007 to analyze the potential environmental impacts of alternatives to disposition about 13 MT of surplus plutonium for which it had not previously made disposition decisions (72 FR 14543; March 28, 2007). DOE amended the NOI in 2010 to refine its information on the quantity and types of surplus weapons-usable plutonium material, evaluate additional alternatives, and no longer consider one of the alternatives identified in the 2007 NOI (75 FR 41850; July 19, 2010). DOE also proposed to revisit its January 2000 decision to construct and operate a new Pit Disassembly and Conversion Facility (PDCF) in the F-Area at SRS (65 FR 1608; January 11, 2000) and analyze installation and operation of pit disassembly and conversion capabilities in an existing building in K-Area at SRS. DOE amended the NOI for a second time in 2012 (77 FR 1920, January 12, 2012) to add additional options for pit disassembly and conversion, which could involve the use of Technical Area 55 (TA-55) at the Los Alamos National Laboratory (LANL) in New Mexico, H-Canyon/HB-Line at SRS, as well as the K-Area and the MFFF, both at SRS. The 2007 NOI, the 2010 Amended NOI, and the 2012

second Amended NOI are available at <http://www.energy.gov/nepa> and at <http://www.nnsa.energy.gov/nepa/spdsupplementaleis>.

Alternatives:

In addition to a No Action Alternative, in this SPD Supplemental EIS DOE evaluates four action alternatives to disposition 13.1 metric tons (14.4 tons) of surplus plutonium for which DOE has not made a disposition decision, including 7.1 metric tons (7.8 tons) of plutonium from pits that were declared excess to national defense needs. Within each action alternative, DOE also evaluates options for pit disassembly and conversion. The action alternatives are: (1) Immobilization to Defense Waste Processing Facility (DWPF) Alternative – glass can-in-canister immobilization for both surplus non-pit and disassembled and converted pit plutonium; (2) MOX Fuel Alternative – fabrication of the disassembled and converted pit plutonium and 4 of the 6 metric tons of the non-pit plutonium into MOX fuel at MFFF for use in domestic, commercial nuclear power reactors to generate electricity and disposition of the surplus plutonium that is not suitable for MFFF as transuranic (TRU) waste at the Waste Isolation Pilot Plant (WIPP), a deep geologic repository in southeastern New Mexico; (3) H-Canyon/HB-Line to DWPF Alternative – processing the surplus non-pit plutonium in the existing H Canyon/HB Line at SRS and subsequent disposal as high level nuclear waste (HLW) (i.e., vitrification in the existing DWPF) and fabrication of the pit plutonium into MOX fuel at MFFF; and (4) WIPP Alternative – disposal of the surplus non-pit plutonium as TRU waste at WIPP and fabrication of the pit plutonium into MOX fuel at MFFF.

Pit Disassembly and Conversion Options: DOE evaluated the range of reasonable pit disassembly and conversion options and combinations of options for analysis in the *SPD Supplemental EIS*: (1) a standalone PDCF at F-Area at SRS, (2) a pit disassembly and conversion project (PDC) at K-Area at SRS, (3) a pit disassembly and conversion capability in the Plutonium Facility (PF-4) in TA-55 at LANL and metal oxidation in MFFF, and (4) a pit disassembly and conversion capability in PF-4 at LANL with the potential for pit disassembly in K-Area, conversion to oxide in H-Canyon/HB-Line, and conversion to oxide in MFFF at SRS.

Use of MOX Fuel: This SPD Supplemental EIS also analyzes the potential environmental impacts of using MOX fuel fabricated from surplus plutonium in domestic commercial nuclear power reactors to generate electricity, including five reactors at two specific TVA reactor plants.

Preferred Alternative: The MOX Fuel Alternative is DOE's Preferred Alternative for surplus plutonium disposition. DOE's preferred option for pit disassembly and the conversion of surplus plutonium metal, regardless of its origins, to feed for MFFF is to use some combination of facilities at TA- 55 at LANL and K Area, H Canyon/HB Line, and MFFF at SRS, rather than to construct a new standalone facility. This would likely require the installation of additional equipment and other modifications to some of these facilities. DOE's preferred alternative for disposition of surplus plutonium that is not suitable for MOX fuel fabrication is disposal at WIPP. The TVA does not have a preferred alternative at this time regarding whether to pursue irradiation of MOX fuel in TVA reactors and which reactors might be used for this purpose.

Invitation for Public Comment on the Draft SPD EIS: DOE will hold six public hearings on the Draft SPD Supplemental EIS at the following dates, times, and locations:

- August 21, 2012 (5:30 p.m. to 8 p.m.) Holiday Inn Express, 60 Entrada Drive, Los Alamos, New Mexico 87544
- August 23, 2012 (5:30 p.m. to 8 p.m.) Courtyard by Marriott Santa Fe, 3347 Cerrillos Road, Santa Fe, New Mexico 87507
- August 28, 2012 (5:30 p.m. to 8 p.m.) Pecos River Village Conference Center, 711 Muscatel Drive, Carlsbad, NM 88220
- September 4, 2012 (5:30 p.m. to 8 p.m.) North Augusta Municipal Center, 100 Georgia Avenue, North Augusta, South Carolina 29841
- September 11, 2012 (5:30 p.m. to 8 p.m.) Chattanooga Convention Center, 1150 Carter Street, Chattanooga, TN 37402
- September 13, 2012 (5:30 p.m. to 8 p.m.) Calhoun Community College, Decatur Campus, Aerospace Building, 6250 Highway 31 North, Tanner, AL 35671

Individuals who would like to present comments orally at these hearings should register upon arrival at the hearing. Speaking time will be allotted by the hearing moderator to each individual wishing to speak to ensure that all who wish to speak have the opportunity to do so. DOE representatives will be available during an open house portion of these hearings to discuss the Draft SPD Supplemental EIS. Following a presentation by DOE, the public will have an opportunity to provide oral and written comments during the formal portion of the hearing. In preparing the final SPD Supplemental EIS, DOE

will consider all comments presented at the hearing, comments received by fax or email and comments postmarked by the end of the comment period. DOE will consider comments received after that date to the extent practicable.

Issued in Washington DC on July 17, 2012

Thomas P. D'Agostino
Under Secretary for Nuclear Security

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